

Applicant: Sol P. DiJaili et al.

Confirmation No.: 7346

Serial No.: 10/789,126

Att'y Docket No.: 15436.247.40.1.1

Filing Date: February 27, 2004

Group: 2633

For: OPTICAL LATCH BASED ON LASING SEMICONDUCTOR OPTICAL AMPLIFIERS

INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANTU.S. Patent Documents

<u>Examiner Initial*</u>	<u>Document Number</u>	<u>Issue Date</u>	<u>Name</u>
<u>TR</u> 1	3,467,906	09/16/1969	Cornely et al.
<u>TR</u> 2	3,828,231	08/06/1974	Yamamoto
<u>TR</u> 3	4,794,346	12/27/1988	Miller
<u>TR</u> 4	5,299,054	03/29/1994	Geiger
<u>TR</u> 5	5,305,412	04/19/1994	Paoli
<u>TR</u> 6	5,436,759	07/25/1995	Dijaili et al.
<u>TR</u> 7	5,604,628	02/18/1997	Parker et al.
<u>TR</u> 8	5,654,822 B1	08/05/1997	Ducellier et al.
<u>TR</u> 9	5,673,141 B1	09/30/1997	Gambini
<u>TR</u> 10	5,748,653	05/05/1998	Parker et al.
<u>TR</u> 11	5,754,571	05/19/1998	Endoh et al.
<u>TR</u> 12	5,771,320	06/23/1998	Stone
<u>TR</u> 13	5,778,132	07/07/1998	Csipkes et al.
<u>TR</u> 14	5,805,322	09/08/1998	Tomofuji
<u>TR</u> 15	5,949,807	09/07/1999	Fujimoto et al.
<u>TR</u> 16	5,960,024	09/28/1999	Li et al.
<u>TR</u> 17	5,999,293	12/07/1999	Manning
<u>TR</u> 18	6,044,100	03/28/2000	Hobson et al.
<u>TR</u> 19	6,061,156	05/09/2000	Takeshita et al.
<u>TR</u> 20	6,115,517	09/05/2000	Shiragaki et al.
<u>TR</u> 21	6,128,115	10/03/2000	Shiragaki et al.

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<u>Re</u> 22	6,243,407	06/05/2001	Mooradian
<u>Re</u> 23	6,317,531 B1	04/10/2001	Lagerstrom et al.
<u>Re</u> 24	6,215,583 B1	11/13/2001	Chen et al.
<u>Re</u> 25	6,333,799 B1	12/25/2001	Bala et al.
<u>Re</u> 26	6,335,992 B1	01/01/2002	Bala et al.
<u>Re</u> 27	6,347,104 B1	02/12/2002	Dijaili et al.
<u>Re</u> 28	6,445,495 B1	09/03/2002	Walker et al.
<u>Re</u> 29	6,462,865 B1	10/08/2002	Chu et al.
<u>Re</u> 30	6,512,629 B1	01/28/2003	Dijaili et al.
<u>Re</u> 31	6,522,462 B2	02/18/2003	Chu et al.
<u>Re</u> 32	6,577,654 B1	06/10/2003	Dijaili et al.
<u>Re</u> 33	6,647,041 B1	11/11/2003	Verma et al.
<u>Re</u> 34	6,707,600 B1	03/16/2004	Dijaili et al.
<u>Re</u> 35	6,714,344 B2	03/30/2004	Islam et al.
<u>Re</u> 36	2002/0001112	01/03/2002	Song
<u>Re</u> 37	2004/0012845 A1	01/22/2004	Wang
<u>Re</u> 38	2004/0017604 A1	01/29/2004	DiJaili et al.

Foreign Patent Documents

Examiner Initial*	Document Number	Publication Date	Country or Patent Office	Translation
<u>Re</u> 39	56-6492 /	01/23//1981	Japan	No
<u>Re</u> 40	10-190147 /	07/21/1998	Japan	No
<u>Re</u> 41	1-129483 /	05/22/1989	Japan	No
<u>Re</u> 42	02000012978A /	01/14/2000	Japan	No

Examiner: FAEZ ASSEF

Date Considered:

12/8/05

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Other Documents

(including author, title, pertinent pages, etc.)

Examiner

Initial*

- P 43 Alcatel, *Alcatel Optronics Introduces a Gain-Clamped Semiconductor Optical Amplifier*, Press Release for Immediate Publication, OFC 1998, San Jose, 1 unnumbered page, February 1998.
- P 44 S. Diez et al., *All-Optical Switch for TDM and WDM/TDM Systems Demonstrated in a 640 Gbit/s Demultiplexing Experiment*, Electronics Letters, Vol. 34, No. 8, pp. 803-805, April 16, 1988.
- P 45 S. Diez et al., *Gain-Transparent SOA-Switch for High-Bitrate OTDM Add/Drop Multiplexing*, IEEE Photonic Technology Letters, Vol. 11, No. 1, pp. 60-62, January 1999.
- P 46 S. Diez et al., *Novel Gain-Transparent SOA-Switch for High Bitrate ODTM Add/Drop Multiplexing*, ECOC 1998, Vol. 1, pp. 461-462, September 1998.
- P 47 F. Dorgeuille et al., *1.28 Tbit/s Throughput 8x8 Optical Switch Based on Arrays of Gain-Clamped Semiconductor Optical Amplifier Gates*, Optical Fiber Communication Conference, Vol. 4, pp. 221-223, March 2000.
- P 48 F. Dorgeuille et al., *Fast Optical Amplifier Gate Array for WDM Routing and Switching Applications*, OFC 1998 Technical Digest, pp. 42-44, 1998.
- P 49 P. Doussiere et al., *Clamped Gain Traveling Wave Semiconductor Optical Amplifier for Wavelength Division Multiplexing Application*, IEEE, US, Vol. Conf. 14, pp. 185-186, New York, September 14, 1994.
- P 50 J.D. Evankow, Jr., et al., *Photonic Switching Modules Designed with Laser Diode Amplifiers*, IEEE, Journal on Selected Areas in Communications, Vol. 6, No. 7, pp. 1087-1095, August 1988.
- P 51 B. Femier et al., *Fast (3000 ps) Polarization Insensitive Semiconductor Optical Amplifier Switch with Low Driving Current (70 mA)*, Semiconductor Laser Conference, Conference Digest, 14th IEEE International, pp. 130-131, September 21-15, 1992.
- P 52 J.E. Fouquet et al., *Compact, Scalable Fiber Optic Cross-Connect Switches*, IEEE, 1999 Digest of the LEOS Summer Topical Meetings, pp. 59-60, 1999.

Examiner:

FAYEZ ASSAF

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- TA 53 M.M. Ibrahim, *Photonic Switch Using Surface-Emitting Laser Diode and AOD*, 16th National Radio Science Conference, NRSC 1999, pp. 1-8, Ain Shams University, Cairo, Egypt, February 23-25, 1999.
- TA 54 G. Jeong et al., *Gain Optimization in Switches Based on Semiconductor Optical Amplifiers*, Journal of Lightwave Technology, Vol. 13, No. 4, pp. 598-605, April 1995.
- TA 55 S. Kitamura et al., *Spot-Size converter Integrated Semiconductor Optical Amplifiers for Optical Gate Applications*, IEEE Journal of Quantum Electronics, Vol. 35, No. 7, pp. 1067-1074, July 1999.
- R 56 J. Leuthold et al., *All-Optical Space Switches with Gain and Principally Ideal Extinction Ratios*, IEEE Journal of Quantum Electronics, Vol. 34, No. 4, pp. 622-633, April 1998.
- R 57 L.R. McAdams et al., *Linearizing High Performance Semiconductor Optical Amplifiers: Techniques and Performance*, LEOS Presentation, pp. 363-364, 1996.
- R 58 J. Mork et al., *Semiconductor Devices for All-Optical Signal Processing: Just How Fast Can They Go?*, IEEE Lasers and Electro-Optics Society 1999 12th Annual Meeting, LEOS 1999, Vol. 2, pp. 900-901, November 8-11, 1999.
- TA 59 V.G. Mutalik et al., *Analog Performance of 1310-nm Gain-Clamped Semiconductor Optical Amplifiers*, OFC 1997 Technical Digest, pp. 266-267, 1997.
- R 60 K. Panajotov et al., *Polarisation Switching in Proton-Implanted VCSELs*, 1999 Digest of the LEOS Summer Topical Meetings, pp. 55-56, July 26-30, 1999.
- R 61 B.C. Qui et al., *Monolithically Integrated Fabrication of 2x2 and 4x4 Crosspoint Switches Using Quantum Well Intermixing*, 2000 International Conference on Indium Phosphide and Related Materials, Conference Proceedings, pp. 415-418, May 14-18, 2000.
- R 62 J. Scheuer et al., *Nonlinear On-Switching of High Spatial Frequency Patterns in Ring Vertical Cavity Surface Emitting Lasers*, 1999 IEEE LEOS Annual Meeting Conference Proceedings, 12th Annual Meeting, IEEE Lasers and Electro-Optics Society 1999 Annual Meeting, Vol. 1, pp. 123-124, November 8-9, 1999.
- R 63 H. Soto et al., *All-Optical Switch Demonstration Using a Birefringence Effect in a Semiconductor Optical Amplifier*, IEEE CLEO, Pacific rim 1999, pp. 886-889, 1999.

Examiner: FAYEZ ASHAR

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12 / 8 / 05

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Filing Date: February 27, 2004

Group: 2633

For: OPTICAL LATCH BASED ON LASING SEMICONDUCTOR OPTICAL AMPLIFIERS

- 64 C. Tai et al., *Dynamic Range and Switching Speed Limitations of an $N \times N$ Optical Packet Switch Based on Low-Gain Semiconductor Optical Amplifiers*, IEEE Journal of Lightwave Technology, Vol. 14, No. 4, pp. 525-533, April 4, 1996.
- 65 L.F. Tiemeijer et al., *High-Gain 1310 nm Semiconductor Optical Amplifier Modules with a Built-In Amplified Signal Monitor for Optical Gain Control*, IEEE Photonics Technology Letters, Vol. 9, No. 3, pp. 309-311, March 1997.
- 66 G. Toptchiyski et al., *Time-Domain Modeling of Semiconductor Optical Amplifiers for OTDM Applications*, IEEE Journal of Lightwave Technology, Vol. 17, No. 12, pp. 2577-2583, December 1999.
- 67 L.F. Tiemeijer et al., *Reduced Intermodulation Distortion in 1300 nm Gain-Clamped MQW Laser Amplifiers*, IEEE Photonics Technology Letters, Vol. 7, No. 3, pp. 284-286, March 1995.
- 68 R. van Roijen et al., *Over 15 dB Gain From a Monolithically Integrated Optical Switch with an Amplifier*, IEEE Photonics Technology Letters, Vol. 5, No. 5, pp. 529-531, May 1993.
- 69 N. Yoshimoto et al., *Spot-Size Converted Polarization-Insensitive SOA Gate with a Vertical Tapered Submicrometer Stripe Structure*, IEEE Photonics Technology Letters, Vol. 10, No. 4, pp. 510-512, April 4, 1998.
- 70 J.D. Walker et al., *A Gain-Clamped, Crosstalk Free, Vertical Cavity Lasing Semiconductor Optical Amplifier for WDM Applications*, summaries of the papers presented at the topical meeting, Integrated Photonics Search; 1996 Technical Digest Series; Proceedings of Integrated Photonics; Boston, MA, USA, 29.04-02.05 1996, Vol. 6, pp. 474-477.
- 71 B. Bauer et al., *Gain Stabilization of a Semiconductor Optical Amplifier by Distributed Feedback*, IEEE Photonics Technology Letters, Vol. 6, No. 2, pp. 182-185, February 1994.
- 72 S. Gee et al., *High-Power Mode-Locked External Cavity Semiconductor Laser Using Inverse Bow-Tie Semiconductor Optical Amplifiers*, IEEE Journal of Selected topics in Quantum Electronics, Vol. 4, No. 2, pp. 209-215, March/April 1998.
- 73 C.H. Joyner et al., *Extremely Large Band Gap Shifts for MQW Structures by Selective Epitaxy on SiO_2 Masked Substrates*, IEEE Photonics Technology Letters, Vol. 4, No. 8, pp. 1006-1009, September 1992.

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- R 74 F. Koyama et al., *Multiple-Quantum-Well GaInAs/GaInAsP Tapered Broad-Area Amplifiers with Monolithically Integrated Waveguide Lens for High-Power Applications*, IEEE Photonics Technology Letters, Vol. 5, No. 8, pp. 916-919, August 1993.
- R 75 J.C. Simon et al., *Travelling Wave Semiconductor Optical Amplifier with Reduced Nonlinear Distortions*, Electronics Letters, Vol. 30, No. 1, pp. 49-50, January 6, 1994.
- R 76 L.F. Tiemeijer et al., *1310-nm DBR-Type MQW Gain-Clamped Semiconductor Optical Amplifiers with AM-CATV-Grade Linearity*, IEEE Photonics Technology Letters, Vol. 8, No. 11, pp. 1453-1455, November 1996.
- R 77 L.F. Tiemeijer et al., *High-Gain 1310 nm Semiconductor Optical Amplifier Modules with a Built-in Amplified Signal Monitor for Optical Gain Control*, IEEE Photonics Technology Letters, Vol. 9, No. 3, pp. 309-311, March 1997.
- R 78 Agility Unveils Long-Haul Laser, Light-Reading – The Global Site for Optical Networking, retrieved from internet www.lightreading.com/document.asp, March 30, 2001.
- R 79 Wolfson et al., *Detailed Theoretical Investigation of the Input Power Dynamic Range for Gain-Clamped Semiconductor Optical Amplifier Gates at 10 Gb/s*, IEEE Photonics Technology Letters, 1998, Vol. 10, No. 9, pp. 1241-1243.
- R 80 F. Robert et al., *All-Optical Set-Rest Operation of a Bistable Semiconductor Laser Intracavity-Coupled to a Vertical-Cavity Surface-Emitting Laser*, IEEE Photonic Technology, Letters, Vol. 12, No. 5, May 2000, pp. 465-467.
- R 81 D.B. Shire et al., *Gain Controlled Vertical Cavity Surface Emitting Lasers Coupled with Intracavity In-plane Lasers*, Appl. Phys. Lett. Vol. 66, No. 14, April 3, 1995, pp. 1717-1719.

Examiner:

FAYEZ ASSAF

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Form PTO-1449

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References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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